



Let's consider $AF = AD = DE = EF = a$, $AB = BC = AC = b$
 DB will be equal to CF

$$\text{Area of } \triangle ADB = \frac{1}{2} ax$$

$$\text{Area of } \triangle BCE = \frac{1}{2} (a-x)(a-x) = \frac{1}{2} (a-x)^2$$

$$\text{Ratio} = \frac{\triangle BCE}{\triangle ADB} = \frac{\frac{1}{2} (a-x)^2}{\frac{1}{2} ax} = \frac{(a-x)^2}{ax}$$

$$\triangle BCE \text{ is Right triangle so } (a-x)^2 + (a-x)^2 = b^2$$

$$\Rightarrow (a-x)^2 = \frac{b^2}{2}$$

$$\triangle ADB \text{ is Right Triangle so } a^2 + x^2 = b^2$$

$$\Rightarrow (a-x)^2 + 2ax = b^2$$

$$\frac{b^2}{2} + 2ax = b^2$$

$$2ax = b^2/2 \Rightarrow ax = b^2/4$$

$$\text{Hence Ratio} = \frac{b^2/2}{b^2/4} = \underline{\underline{2}} \text{ --- Answer}$$